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# (12) United States Patent

Hultgren et al.

# (54) GUM TISSUE GUIDE, SYSTEMS AND METHODS OF PRODUCING AND UTILIZING THE SAME

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### (57) ABSTRACT

A method, device and system for modifying the gingival margin of a patient is disclosed. A method includes obtaining an electronic model of the dentition of a patient, determining an incision path along the gingival surface based on the electronic model, generating and fabricating a guide arrangement to assist in cutting the gingival surface of the patient, mounting the guide arrangement to the dentition of the patient, and cutting the gingival surface of the patient with the assistance of the guide arrangement. A guide arrangement includes a mounting portion and a template portion coupled to the mounting portion along the gingival surface of the guide arrangement and positioned to provide a desired incision path. A system includes a three dimensional scanner, a computer system and a fabricating device.

### 7 Claims, 14 Drawing Sheets

